Over the last three years I have led a transformation of the Survey of Calculus course at Michigan State University. This applied calculus course serves over 3600 students per year. I will discuss the new course design, as well as the challenges in transforming large courses. This course redesign is part of a push by the MSU math department to improve introductory math courses, as well as a broader effort across the university to improve STEM gateway classes. I will briefly discuss efforts and programs at the department and university level that have led to these changes in institutional teaching culture.